Chapter 2

Additional Information Concerning Environmental Impacts and Mitigation

2. ADDITIONAL INFORMATION CONCERNING ENVIRONMENTAL IMPACTS AND MITIGATION

This chapter updates the substantive content of Chapter 3 of the July 2002 Drainage, Wetland/Habitat Complex and Sports Fields/Courts Project Final EIS, as amended by the May 2003 Final Supplemental EIS. Chapter 3 of the Final EIS described the affected environment, expected environmental impacts and possible mitigation measures for each of 13 elements of the environment addressed in the EIS. With respect to environmental impacts, the EIS identified impacts expected to result from the proposed action, the lesser-capacity alternative and the no action alternative. The July 2002 Final EIS and the May 2003 Final SEIS were widely distributed at the time of their publication and remain available for review at the Parks Department offices at Sand Point Magnuson Park, on the Parks Department website, and at several local libraries.

According to the SEPA Rules and the corresponding portion of the Seattle Municipal Code, an EIS addendum is an environmental document used to provide additional information or analysis that does not substantially change the analysis of significant impacts and alternatives provided in existing environmental documents (WAC 197-11-706 and 197-11-600[4][c] and SMC 25.05.706 and 25.05.600.D.3). The Addendum has been prepared to provide additional or updated information regarding the environmental impacts identified in the Final EIS and the Final SEIS, specifically with respect to incremental changes to those impacts associated with the design and operational modifications incorporated into the revised field alternative to the proposed action. The Addendum does not identify new or significantly different impacts relative to those reported in the previous environmental documents.

The substantive information included in an addendum adds to, but does not replace, the information provided in the relevant existing environmental documents. In this case, the Addendum provides information about expected environmental impacts under the revised field alternative in relation to those identified for the proposed action in the Final EIS or the SEIS. In each of the following sections, the general approach is to briefly summarize the types and levels of impacts identified in the Final EIS for the proposed action, explain how the impacts for the revised field alternative would differ from those of the original proposal, and update as necessary the Final EIS discussions of mitigation, cumulative impacts and significant unavoidable adverse impacts. The content of Chapter 2 has been prepared with the objective of minimizing the amount of Final EIS content that is repeated or summarized in the Addendum.

2.1 EARTH

Section 3.1.2 of the Final EIS identified the impacts associated with geology/topography, soils/erosion, and slope stability/geologic hazards expected to result from construction and operation of the proposed project. The types of impact issues addressed included clearing and grading, cut and fill quantities, erosion and associated sedimentation impacts to Lake Washington during construction, erosion from stormwater runoff, destabilization of steep slopes, soil and groundwater sampling for potential contamination, and remediation plans if any contaminants were encountered during construction. The Final EIS indicated that construction activity would unavoidably expose soils and temporarily expose them to erosion, and that these short-term impacts were expected to be insignificant with the implementation of temporary erosion and sedimentation control measures. No significant impacts related to earth resources were identified.

The revised field alternative incorporates minor design changes to the original proposal analyzed in the Final EIS. This alternative contains the same number and type of facilities as the original proposal, as well as the same amount of total project acreage, only in a different configuration on the sports field portion of the site. Therefore, impacts associated with geology/topography, soils/erosion and geologic hazards for this alternative would be essentially the same as those described for the original proposal in the Final EIS.

The cumulative impact assessment discussed in Section 3.1.4 of the Final EIS remains applicable to the revised field alternative, as do mitigation measures described in Section 3.1.5. With the implementation of temporary erosion and sediment control measures, the Final EIS identified no significant unavoidable adverse impacts for the original proposal. This conclusion remains applicable to the revised field alternative.

2.2 WATER

Section 3.2 of the Final EIS discussed potential impacts of the proposed action on water resources. Specific issues addressed in the Final EIS included hydrology/runoff patterns, water quantity and water quality. Based on mitigation measures incorporated in the project plans and the natural drainage features that are an integral element of the project proposal, the Final EIS indicated that the project would not be likely to cause any significant adverse impacts on hydrology or water quantity, and would likely have positive long-term effects on water quality.

The revised field alternative incorporates minor changes to the design and physical characteristics of the sports field component of the proposed action. The revised field alternative includes the same drainage-related programmatic elements as the proposed action, although the specific layout of the drainage outfalls from the sports fields would be adjusted in conjunction with the revised field layout. The total impervious surface area for the revised field alternative is less than the quantity for the proposed action by approximately 1.8 acres, through a reduction in impervious pathways and parking areas in the sports field areas of the project site. Based on the very close similarities in water-related aspects of the project plans, the post-construction hydrology/runoff, water quantity and water quality characteristics of the revised field alternative would be essentially the same as those described for the proposed action (in Sections 2.2.4 and 3.2.2 of the Final EIS).

The hydrology of the wetland/habitat complex under the revised field alternative would be the same as described for the proposed action in Section 3.2.2.1 of the Final EIS. Runoff patterns for the sports fields area would be modified slightly with the revised sports field layout; with the same programmatic elements still incorporated into the revised field design, however, water quantity conditions would be changed very little from those described for the proposed action.

Water quality conditions for the revised field alternative would be the same as originally identified for the proposed action. Construction of the revised field alternative would result in potential for short-term erosion and sedimentation impacts in localized areas of the project site, consistent with the project phasing plan, but these impacts would be limited to insignificant levels through the application of temporary erosion and sediment control measures as described in the Final EIS. Runoff requiring water quality treatment would be routed through at least one of several different treatment systems that would be developed on the project site. The amount of runoff requiring treatment would be slightly less for the revised field alternative, as the area of parking lot surface and the corresponding amount of runoff is somewhat reduced in the revised field alternative. As for the original proposal, the revised field alternative would likely result in improved water quality because runoff from and through the project site is currently untreated.

The Final EIS discussions of cumulative impacts (Section 3.2.4), mitigation measures (Section 3.2.5) and significant unavoidable adverse impacts (Section 3.2.6) remain applicable for the revised field alternative.

2.3 PLANTS/WETLANDS

Section 3.3.2 of the Final EIS discussed potential impacts of the proposed action on plants and wetlands at the project site. Specific issues addressed in the Final EIS included short-term construction impacts; long-term direct impacts through displacement and habitat conversion; long-term indirect impacts through changes in hydrology/runoff patterns, water quality, increased human use and lighting system use; and effects on wetland functions. Based on mitigation measures incorporated in the project plans and proposed development of the wetland/habitat that is an integral element of the project proposal, the Final EIS indicated that the project would not be likely to cause any significant adverse impacts on existing plant communities and wetlands. The Final EIS reported that the net long-term effect of the project would be to increase the area of functioning wetland and upland vegetative communities on the project site, thereby mitigating for conversion of some of the existing habitats.

The revised field alternative incorporates changes to the design and physical characteristics of the sports field component of the proposed action, but no changes to the proposed plans for the wetland habitat complex. The revised field alternative includes the same drainage-related programmatic elements as the proposed action, although the specific layout of the drainage outfalls from the sports fields would be adjusted in conjunction with the revised field layout. As documented in **Section 2.2** of this Addendum, the post-construction hydrology/runoff, water quantity and water quality characteristics of the revised field alternative would be essentially the same as those described for the proposed action (in Sections 2.2.4 and 3.2.2 of the Final EIS).

The design changes of the revised field alternative that could translate into changed conditions in the wetland/habitat complex, compared to those identified in the Final EIS for the original proposal, are those involving the configuration of the sports fields and the sports field lighting systems. In addition, the revised field alternative includes operational limitations on the hours of sports field lighting, which would have a bearing on the lighting conditions experienced in the wetland/habitat complex. Consequently, the following discussion focuses on the lighting-related features of the revised field alternative, as they represent the potential source of differences in impact levels relative to the impacts identified in the Final EIS for the original proposal.

2.3.1 Short-Term (Construction) Impacts

Construction impacts for the revised field alternative would pose the same potential effects on plant communities and wetlands as those described for the proposed action in the Final EIS. The reconfiguration of the sports fields would neither reduce nor increase potential construction impacts. The information provided in Section 3.3.2.1 of the Final EIS remains applicable to the revised field alternative.

2.3.2 Long-Term Direct Impacts

The revised field alternative does not include changes to the size or composition of the wetland/habitat complex. Long-term direct impacts on plant communities and wetlands from the revised field alternative would be the same as the impacts described for the original proposal in Section 3.3.2.2 of the Final EIS. **Sketch A13** in **Appendix A** indicates the areas of existing vegetation communities that would be converted to other cover types through development of the project.

2.3.3 Long-Term Indirect Impacts

2.3.3.1 Water Quantity and Quality

As noted above, the revised field alternative would result in the same post-construction hydrology and water quality conditions as would the original proposal. Therefore, the potential water quantity and quality impacts on upland and wetland communities described in Section 3.3.2.3 of the Final EIS remain applicable to the revised field alternative.

2.3.3.2 Human Disturbance

The potential human disturbance impacts from the revised field alternative would essentially match those described for the original proposal in Section 3.3.2.3 of the Final EIS. The operational limitations on field use in the late evening hours would reduce the numbers of sports field visitors present in the park after 9 PM with the revised field alternative, although this change would likely have a negligible effect on the number of visitors entering the wetland/habitat complex.

2.3.3.3 Lighting System Use

As described in **Section 2.9** of this Addendum, the revised field alternative incorporates both design and operational changes to the original proposal that would modify the sports field lighting characteristics that would be experienced in the wetland/habitat complex. **Figure 2-1** (see **Section 2.9**) shows the spill light levels for the revised field alternative configuration compared to those for the original proposed action described in the Final EIS. The majority of the spill light from the revised field alternative would fall immediately adjacent to the fields and within park boundaries. Some spill light would extend into a portion of the wetland/habitat complex to the east, the residential area to the south and the transitional housing facility to the west of the athletic field complex. Under the revised field alternative, the increased setback distances around the sports fields would slightly reduce the extent of spill light falling into the western edges of the wetland/habitat complex.

In addition, the modified lighting schedules described for the revised field alternative would result in reduced frequency and duration of nighttime sports field use. Potential impacts from light and glare in the habitat zones of the park would likewise be reduced, as there would be a modest aggregate reduction in the number of hours when sports fields adjacent to the wetland/habitat complex were illuminated. Overall, the revised field alternative would provide a minor reduction in the level of potential environmental impact from sports field lighting, in comparison to the original proposal. As noted in Section 3.3.2.3 of the Final EIS, however, it is unlikely that the sports field lights would have a perceptible effect on the actual plant communities within the wetland/habitat complex.

2.3.4 Effects on Wetland Functions

The revised field alternative would result in no expected difference in the potential effects on wetland functions relative to those described for the original proposal. Section 3.3.2.4 of the Final EIS remains applicable to the revised field alternative.

2.3.5 Cumulative Impacts

Cumulative plant and wetland impacts for the revised field alternative would remain similar to those described in the Final EIS for the original proposal. There should be no change in potential cumulative impacts based on the revised field configuration.

2.3.6 Mitigation Measures

As described for the original proposal in the Final EIS, the revised field alternative would result in the direct fill of existing wetlands, and thereby be subject to appropriate City, State and Federal wetland and water quality permit conditions. The revised field alternative would not be expected to result in a measurable change in wetland impacts from those identified for the original proposal. The information presented in Section 3.3.5 of the Final EIS remains applicable to the revised field alternative.

2.3.7 Significant Unavoidable Adverse Impacts

Implementation of the revised field alternative would cause unavoidable loss or conversion of some existing plant communities on the project site, as reported for the original proposal in the Final EIS. Section 3.3.6 of the Final EIS noted that the net long-term effect of the project would be to increase the area of functioning wetland and upland vegetative communities on the project site, thereby mitigating for conversion of some of the existing habitats. The Final EIS also indicated that the original proposal would not likely create water quantity or quality changes that would result in significant adverse impacts to wetlands, and that probable significant adverse impacts associated with the substantial increase in human use on the project site had not been identified. These conclusions remain applicable for the revised field alternative.

2.4 ANIMALS AND FISH

Impacts of the original proposed project at Sand Point Magnuson Park to fish and wildlife were discussed in the Drainage, Wetland/Habitat Complex and Sports Fields/Courts Project Final EIS and Final SEIS (July 2002 and May 2003, respectively). Additional material relevant to the revised field alternative is summarized in this section of the Addendum.

Section 3.4 of the Final EIS discussed potential impacts of the proposed action on animals and fish. Specific issues addressed in the Final EIS included construction impacts, long-term habitat conversion, general human disturbance effects, and the specific disturbance effects of sports field lighting. The Final EIS noted that the proposed action was designed to provide beneficial habitat for salmonids and would not result in the loss of existing habitat, and therefore would not have adverse effects on fish. Based on mitigation measures incorporated in the project plans and the wetland/habitat complex that is an integral element of the proposal, the Final EIS indicated that the proposal would likely result in positive (rather than adverse) impacts on the extent and quality of wildlife habitat. The Final EIS also noted that increased human use associated with the project could be detrimental to wildlife species that are sensitive to human use, although the proposal included measures to minimize disturbance effects on wildlife.

Section 2.3.2 of the Final SEIS documented a supplemental analysis of the potential impacts of sports field noise on wildlife. The Final SEIS reported that the magnitude of the potential change in noise levels from operation of the proposed sports field would be slight (less than a 3-dBA increase), and that typical and maximum sound levels with the proposed action would be within the range of sound levels presently occurring on the site. The primary change in ambient noise conditions on the site would be expanded frequency and duration of sports field noise and, because the predicted sound levels with the project would be similar to those that presently occur, it was not feasible to predict the incremental impact that might be associated with an increase in frequency and duration of current noise levels. The Final SEIS also noted that the proposed action would provide an enhanced refuge area for noise-sensitive species in the central part of the wildlife habitat complex, that the possible adverse effects of sports field noise would most likely be limited to breeding birds, and that the timing aspects of expected changes in sports field noise patterns would provide little potential to interfere with breeding bird activities.

2.4.1 Wildlife Impacts of the Revised Field Alternative

The revised field alternative incorporates changes to the design and physical characteristics of the sports field component of the proposed action, but no changes to the proposed plans for the wetland habitat complex. The revised field alternative includes the same amount of athletic field surface area and road surface area as the original proposal, and a slightly smaller (by 1.8 acres) overall impervious surface area relative to the original proposal. Consequently, the characteristics of the revised field alternative that would determine the level of construction impacts and long-term habitat conversion would be the same as those characteristics for the original proposal.

The design changes of the revised field alternative that could translate into changed conditions in the wetland/habitat complex, compared to those identified in the Final EIS and the SEIS for the original proposal, are those involving the configuration of the sports fields and their lighting systems. In addition, the revised field alternative includes operational limitations on the hours of sports field lighting, which would have a bearing on both the lighting and noise conditions experienced in the wetland/habitat

complex. Consequently, the following discussion focuses on the lighting- and noise-related features of the revised field alternative, as they represent the potential source of differences in impact levels relative to the wildlife impacts identified in the Final EIS and the SEIS for the original proposal.

As described in **Section 2.9** of this Addendum, the revised field alternative incorporates both design and operational changes to the original proposal that would modify the sports field lighting characteristics that would be experienced in the wetland/habitat complex. **Figure 2-1** shows the spill light levels for the revised field alternative configuration compared to those for the original proposed action described in the Final EIS. As was the case for the original proposal, the majority of the spill light from the revised field alternative would fall immediately adjacent to the fields and within park boundaries. Some spill light would still extend into a portion of the wetland/habitat complex to the east of the fields. Under the revised field alternative, however, the increased setback distances around the sports fields would slightly reduce the extent of spill light falling into the western edges of the wetland/habitat complex.

In addition, the modified lighting schedules described for the revised field alternative would result in reduced frequency and duration of nighttime sports field use. Potential impacts from light and glare in the habitat zones of the park would likewise be reduced, as there would be a modest aggregate reduction in the number of hours when sports fields adjacent to the wetland/habitat complex were illuminated. Overall, the revised field alternative would provide a minor reduction in the level of potential environmental impact from sports field lighting, in comparison to the original proposal.

The reconfigured sports field layout and operational limitations of the revised field alternative would also result in minor changes to the predicted noise conditions in the wetland/habitat complex, relative to the noise characteristics identified for the original proposal. Section 2.3.1 of the Final SEIS identified predicted ranges of sports field sound levels at two locations in the western portion of the wetland/habitat complex, spaced at 50 feet and 200 feet to the east of the proposed location for the walking trail around the perimeter of the wetland/habitat complex. **Table 2-1** shows the predicted ranges of typical sound levels (L25s), maximum sound levels (Lmax) and energy-average sound levels (Leq[24]) for these locations under the original proposal and the revised field alternative. In all cases, the ranges of predicted sound levels for the revised field alternative are essentially the same as or slightly less than the ranges estimated for the original proposal. The degree of difference between the two sets of ranges is generally from 1 to 3 dBA, indicating that the difference would barely be perceptible. Nevertheless, the table demonstrates that sound levels in the wetland/habitat complex under the revised field alternative would be no greater than the sound levels associated with the original proposal, and would likely be somewhat less.

As discussed above with respect to lighting, the late-evening operational limitations of the revised field alternative would also result in a minor reduction in the frequency and duration of sports field noise within the wetland/habitat complex, relative to the noise conditions for the original proposal.

In summary, athletic field use and lighting under the revised field alternative would be reduced somewhat from the levels anticipated for the original proposal. As a result, potential wildlife impacts related to sports field lighting and noise from the revised field alternative would be the same as or less than the corresponding impacts from the original proposal that were documented in the Final EIS and the SEIS. The consequences of these changes are summarized below for the major wildlife groups.

Table 2-1
Predicted Sound Levels in Wetland/Habitat Complex,
Original Proposal and Revised Field Alternative (dBA)

Time Period	Various Locations 50 Feet East of Walking Path			Various Locations 200 Feet East of Walking Path		
	L_{25}	L_{max}	$L_{eq(24)}$	L_{25}	L_{max}	$L_{eq(24)}$
Fall and Winter						
Original Proposal	35 to 55	54 to 73	39-51	35 to 52	54 to 66	38-48
Revised Field Alternative	36 to 54	51 to 72	41-50	37 to 51	52 to 65	41-46
Spring and Summer						
Original Proposal	42 to 55	61 to 73	44-51	42 to 51	60 to 68	42-48
Revised Field Alternative	39 to 54	55 to 72	45-50	39 to 50	56 to 65	43-47

The equivalent sound level, $L_{eq(24)}$, is essentially an energy-average sound level taken over a 24-hour period. It is being included in this discussion because some studies conducted to determine the potential impacts of noise on birds utilize this noise descriptor. The calculations of the $L_{eq(24)}$ presumed operation of the sports fields would occur from noon to 11 p.m. on weekdays and 9 a.m. to 11 p.m. on weekends.

2.4.1.1 Birds

The Final EIS and the SEIS reported that bird populations at the project site might be negatively impacted by noise and lighting associated with the construction and operation of the proposed sports fields. Under the revised field alternative, lighting and noise levels in on-site wildlife habitats would not be increased from, and would likely be slightly less than levels expected under the original proposed project and described in the Final EIS and the SEIS. In addition, the revised field alternative limits the use of athletic fields at night relative to the original proposal, reducing the expected frequency and duration of noise and light associated with athletic field use. Thus, the revised field alternative is not expected to increase any negative impacts to birds that could be associated with the project, and potential impacts to bird populations would be the same as or slightly less than those identified in the Final EIS and SEIS. As noted in the SEIS, such impacts include potential displacement of bird species during construction and the potential for decreased breeding success in the immediate vicinity of the sports fields.

2.4.1.2 Mammals

Noise and light levels in on-site habitat used by mammals are not expected to increase under the revised field alternative compared to the original proposal; in fact, they are expected to decrease somewhat relative to the original proposal, given the changed physical characteristics and the limitation on athletic field use mentioned above. Therefore, no additional negative impacts to mammalian species, beyond those identified in the Final EIS and SEIS, are expected under the revised field alternative.

2.4.1.3 Amphibians and Reptiles

Similar to the situation with mammalian species, noise and light levels in habitat used by amphibians and reptiles are not expected to increase under the revised field alternative compared to the original proposal;

rather, noise and light levels are expected to decrease somewhat relative to the original proposal. Thus, no additional negative impacts to amphibian and reptile species, beyond those identified in the Final EIS and SEIS, are expected under the revised field alternative.

2.4.2 Cumulative Wildlife Impacts

Under the revised field alternative, no additional negative impacts to wildlife are expected beyond those identified in the Final EIS and FSEIS for the original proposed action. Therefore, the discussions of cumulative impacts to wildlife provided in the Final EIS (Section 3.4.1.4) and the SEIS (Section 2.5) remain applicable to the revised field alternative.

2.4.3 Wildlife Mitigation Measures

All mitigation measures for wildlife described in both Section 3.4.1.5 of the Final EIS and Section 2.6 of the SEIS identified a number of proposed and potential mitigation measures to reduce the possible wildlife impacts of the original proposed action. These measures included lighting and field configuration changes, lighting design changes, structural screening measures, lighting operational changes, wetland/habitat reconfiguration, restricted use of loudspeakers and other noise devises, use of resilient materials on baseball backstops, installing an upland forest buffer between the sports fields and the habitat area, and programming maintenance activities to reduce noise levels. Several of these measures, including field configuration changes, lighting operational changes, restricted use of noise devices and use of upland forest buffers, have specifically been incorporated into the revised field alternative. The remaining mitigation measures for both construction and operation of the original project are still appropriate and applicable to the revised field alternative.

2.4.4 Significant Unavoidable Adverse Wildlife Impacts

No additional significant unavoidable adverse impacts to wildlife are expected under the revised field alternative relative to the original proposal. The Final EIS (Section 3.4.1.6) and the SEIS (Section 2.7) identified significant unavoidable adverse impacts to wildlife as consisting of some reduction in existing usable habitat, potential temporary displacement of some species due to construction, and some potential for reduction in breeding bird densities in the immediate vicinity of the athletic fields. These discussions remain applicable to the revised field alternative, which could result in similar significant unavoidable adverse impacts to wildlife.

2.4.5 Fish

Similar to the original proposal and the impact assessment of the FEIS, no negative impacts to fish populations are expected under the Revised Field Alternative. As stated in the FEIS, a net benefit to fish habitat along the shoreline of Lake Washington is expected as a result of the creation of a 4.4 acre lagoon associated with the project.

The Final EIS discussions of cumulative impacts (Section 3.4.2.3), mitigation measures (Section 3.4.2.4) and significant unavoidable adverse impacts (Section 3.4.2.5) relative to fish remain applicable to the revised field alternative.

2.5 ENERGY AND NATURAL RESOURCES

Section 3.5.2 of the Final EIS identified the impacts associated with energy and natural resource use expected to result from construction and operation of the proposed project. The types of impact issues addressed included energy consumption from sports field lighting as well as security lighting systems, electrical load for the region, increased operations cost for the park, water consumption, and whether the proposal would result in a need for an additional or new water supply source. No significant impacts related to energy and natural resource use were identified in the Final EIS.

The revised field alternative incorporates minor design changes to the sports field component of the original proposal analyzed in the Final EIS; it contains the same number and type of sports field facilities as the original proposal, as well as the same amount of total project acreage, only in a different configuration on the sports field portion of the site. The revised field alternative also includes operational limitations on hours of lighted sports field use, which would result in a change in energy consumption patterns relative to the original proposal. The Final EIS estimated that the sports field lighting systems for the original proposal would represent a total load at full operation of 775 kW, and would consume an estimated 645,000 kilowatt-hours (kWh) of electrical energy annually. The revised field alternative contains 2 fewer lighting poles (78 instead of 80) and 12 fewer luminaires (628 instead of 640) than the original proposal. Therefore, the energy load associated with the revised field alternative would be slightly less than the 775-kW figure cited in the Final EIS. Annual energy consumption for the revised field alternative would also be slightly less than for the original proposal, based solely on the difference in the number of lighting fixtures. In addition, however, energy consumption during the late evening hours for the revised field alternative would be reduced considerably as a result of the operating limitations after 9 PM. This would translate into a modest overall reduction in annual energy consumption compared to the original proposal. Because the Final EIS did not identify significant impacts associated with the project's energy demand and consumption, the specific reduction in energy requirements associated with the revised field alternative has not been quantified.

The modifications to the original proposal that are incorporated in the revised field alternative would not have any effect on the irrigation water requirements for the project that were described in the Final EIS. The domestic water requirements for the original proposal would be reduced slightly as a result of the late-evening operational limitations of the revised field alternative, which would reduce somewhat the numbers of total daily users of the sports fields. Therefore, the Final EIS discussion of water resource impacts remains sufficient for the revised field alternative.

The cumulative impact assessment discussed in Section 3.5.4 of the Final EIS remains applicable to the revised field alternative, as do the mitigation measures described in Section 3.5.5. With the implementation of energy conservation measures, the Final EIS concluded that an increase in energy consumption due to the original proposal could be reduced, but not eliminated. For electricity and water, this unavoidable increase was determined not to be significant within the context of local/regional supply and demand. This conclusion remains applicable to the revised field alternative, which would have lower energy and water demands than the original proposal.

2.6 NOISE

Section 3.6 of the Final EIS discussed the potential noise impacts of the proposed action. The Final EIS included extensive information on the affected environment, including identification of City of Seattle noise limits, characterization of the existing sound environment near the project site, and discussion of the noise complaint history for Sand Point Magnuson Park. Section 3.6.2 of the Final EIS documented the expected noise impacts of the proposed action and addressed the specific noise issues associated with project construction, operation of the sports fields, and traffic generated by use of the proposed facilities. The Final Supplemental EIS presented expanded affected environment information, based on additional on-site sound level measurements, and additional impact analysis addressing the specific issue of the impacts of sports field noise on wildlife.

Section 2.6 of the Addendum documents the expected noise impacts of the revised field alternative relative to the impacts previously identified for the original proposal, including specific information relative to each type of potential noise impact.

2.6.1 Construction Impacts

Section 3.6.2.1 of the Final EIS described expected construction noise impacts for the original proposal. The Final EIS indicated that project construction would result in unavoidable intermittent noise impacts in the neighboring community over a period of approximately 10 years. Based on timing aspects of the construction activity, distance relationships and the required compliance with the City's noise ordinance, the Final EIS concluded these impacts would not likely be significant. The revised field alternative would result in some minor shifts in the construction phasing discussed in the Final EIS for the original proposal. However, the range of construction noise levels through all of the phases would be similar to the original plan, and no new noise impacts over those identified in the Final EIS would be anticipated with the revised field alternative. The Final EIS discussion of construction noise impacts remains applicable to the revised field alternative.

2.6.2 Sports Field Operation Impacts

Section 3.6.2.2 of the Final EIS described expected noise impacts from operation of the sports fields as provided under the original proposal. The Final EIS reported that predicted noise levels from sports field operation would easily meet daytime and nighttime Seattle noise limits during all seasons of the year, and would generally be below or within the range of existing noise levels at the off-site residential locations west of the site and on the hillside south of the site. Therefore, the Final EIS concluded that operational noise impacts from the original proposal at these off-site residential locations would not be significant. The Final EIS also indicated that sports field operation would create unavoidable long-term, intermittent noise impacts for on-site residential receivers (specifically, at Building 224) that might exceed the nighttime Seattle noise limits. Because the predicted sound levels under maximum sports field usage would result in a moderate increase in noise compared to existing levels, and because existing maximum noise events louder than the predicted maximum level with the proposed action currently occur at Building 224, the Final EIS concluded that these on-site operational noise impacts would not be significant. The Final EIS also noted that potential additional mitigation measures that would further reduce the operational noise levels were available.

Section 2.3.1 of the Final SEIS identified the expected noise levels in the wildlife habitat areas from project construction and operation. Section 2.3.2 of the Final SEIS applied that information to assess the potential effects of sports field sound levels on wildlife expected to use the future wetland/habitat complex; additional discussion of that topic is provided in Section 2.4 of the Addendum, along with all other discussion of wildlife impacts related to the revised field alternative. It should be noted, however, that the Final SEIS reported that the projected future sports field sound levels would not be noticeably greater than the sound levels that presently occur with the highest uses of the existing sports fields, although the higher levels of sports field activity would occur more often and for longer durations.

Compared to the original proposed action discussed in the Final EIS and the SEIS, the revised field alternative provides a rearrangement of the proposed sports fields that would result in differences in sound levels of varying magnitudes at all nearby receivers, depending upon the receiving location, season, and time of day. Predicted sound levels have been recalculated for the revised field alternative, using the same methods and field-use assumptions as described in the Final EIS, to determine the nature and extent of any changes in impact results for documentation in this Addendum. However, the predicted sound levels for the revised field alternative reflect two primary operational changes regarding the timing of the use of the fields. Field 5, the field nearest Building 224, would not be lit or scheduled for use after 9 PM, and only 5 of the remaining 10 synthetic-turf fields would be lit at any one time after 10 PM.

As in the analysis documented in the Final EIS, receiver locations considered in the updated noise calculations include the following (see **Section 2.4** of the Addendum for discussion of predicted sound levels and associated potential impacts in the wetland/habitat complex):

- The SPCHA transitional housing units in Building 224, located on the western side of Sports Field Drive opposite from the proposed site for Field 5.

- Residences on the hillside south of Sand Point Magnuson Park, in the vicinity of NE 61st Street

- A location at the base of the hill west of Sand Point Magnuson Park, representing residences in the Park Point condominium complex and on 58th Avenue NE. The noise predictions were based on distance attenuation alone. For residences near the base of the hill, however, numerous obstructions exist between the athletic fields and the residences, and the sound levels received at these residences would likely be much lower than the predicted levels.

- Residences on 57th Avenue NE, on the hillside west of the park and overlooking the site. Residences west of 57th Avenue NE are further from the athletic fields and would experience somewhat lower sound levels. Again, the noise predictions were based on distance attenuation alone. No obstructions were assumed for residences on 57th Avenue NE, although some obstructions exist between at least some of the athletic field areas and almost all of the residences on the hillside.

In addition to the above receiver locations considered in the Final EIS, this Addendum also considers the recently renovated Radford Court housing units nearest NE 65th Street. Potential noise impacts at the nearest Radford Court units were not discussed in the Final EIS, but would be similar to the potential noise impacts discussed in the Final EIS (in the responses to Draft EIS issues) for the 28 LIHI units proposed to be constructed south of NE 65th Street near the intersection with Sports Field Drive.

Based on the revised distances between the various sports fields and the receiving locations described above, the calculated sports field sound levels for the revised field alternative are displayed in **Table 2-2**. Changes from the sound levels predicted for the original proposal are discussed below by location.

At off-site residential locations on the hillsides south and west of the Sand Point Magnuson Park site, predicted sound levels for the revised field alternative change by as much as 4 dBA when compared to the results for the original proposed action. Whether these predicted changes are increases or decreases depends on the receptor location, season of year, and time of day. However, even when the changes result in increases in sound levels, the predicted overall sound levels at all of these off-site residential receivers remain below the measured existing sound levels and well below the Seattle daytime and nighttime noise limits. Therefore, the revised field alternative would not alter the conclusion reported in the Final EIS that the off-site hillside communities surrounding Sand Point Magnuson Park would not be significantly impacted by sports field noise from the project.

At the on-site residential location (i.e., SPCHA Building 224), predicted sound levels with the revised field alternative are as much as 8 dBA lower and up to 2 dBA higher compared to the original proposed action, depending on the season and time of day. The greatest predicted decrease with the revised field alternative occurs during the peak spring/summer period. With the revised field alternative, the predicted hourly L_{25}s meet both daytime and nighttime Seattle noise limits. Under the original proposal, the predicted L_{25} between 10 and 11 PM exceeded the nighttime noise limit. Also, although the predicted Lmax of 61 dBA at night during the spring/summer season exceeds Seattle's nighttime noise limit, it is approximately 8 dBA lower than the predicted L_{max} under the original proposed action. Therefore, the spring/summer noise impacts at Building 224 are anticipated to be lower with the revised field alternative than with the original proposed action. During the fall/winter period, the predicted daytime L_{25} and L_{max} sound levels are slightly lower than with the original field layout, while the nighttime L_{25} and L_{max} levels are slightly higher. The fall/winter predicted sound levels meet both the daytime and nighttime noise limits, however, and no new significant noise impacts at SPCHA Building 224 are identified for the revised field alternative.

Table 2-2
Predicted Sound Levels with Revised Field Alternative (dBA)

Time Period		SPCHA Bldg #224		Hillside South of SPMP		57th Ave NE (West)		Park Point (Base of Hill West)		Radford Court[a]	
		L25	Lmax	L25	Lmax	L25	Lmax	L25	Lmax	L25	Lmax
ORIGINAL PROPOSED ACTION											
Fall and Winter											
Daily	<10 pm	50	66	41	54	40	51	43	54	51	69
	10-11 pm	37	54	32	48	29	44	32	48	44	63
Spring and Summer											
Daily	<10 pm	50	70	41	54	39	55	42	56	51	69
	10-11 pm	49	70	38	53	38	55	40	56	46	63
REVISED FIELD ALTERNATIVE											
Fall and Winter											
Daily	<10 pm	50	64	41	53	40	51	43	55	50	64
	10-11 pm	39	55	29	46	29	44	31	46	32	47
Spring and Summer											
Daily	<10 pm	49	66	41	57	40	54	42	58	50	68
	10-11 pm	44	61	39	57	37	54	40	58	49	68
Seattle Limits	<10 pm	55	70	55	70	55	70	55	70	55	70
	10-11 pm	45	60	45	60	45	60	45	60	45	60

The shaded cells indicate a predicted sound level that exceeds the Seattle noise limits. The limits are 55 dBA L25 and 70 dBA Lmax during daytime hours, and 45 dBA L25 and 60 dBA Lmax during nighttime hours. Daytime hours are 7 a.m. to 10 p.m. weekdays and 9 a.m. to 10 p.m. weekends. Nighttime hours are all others.

[a] The Radford units represent the nearest University of Washington student housing units to NE 65th Street in the Radford Housing Complex. This location is also representative of 28 LIHI housing units that do not currently exist but are being proposed by LIHI south of NE 65th Street near the intersection with Sports Field Drive. Potential noise impacts at the 28 proposed units were discussed in the Final EIS in the response to Draft EIS issues, although the calculated sound levels were not presented in tabular form in the Final EIS.

Reconfiguring the sports field layout under the revised field alternative changes the expected noise conditions relative to the recently renovated Radford Court residential units south of and adjacent to NE 65th Street. The predicted sound levels at the most affected Radford Court units with the revised field alternative could result in higher sound levels during the nighttime hours of the spring and summer and lower levels during daytime hours of the spring and summer and all hours of the fall and winter, when

compared to the original proposal. For this location, the predicted sound levels with both the proposed action and the revised field alternative occasionally exceed the Seattle noise limits, depending on the season and time of day. The measures that the Parks Department has incorporated (as part of the settlement agreement) to mitigate potential noise impacts at the proposed LIHI units would benefit nearby residents in the Radford Court complex (see **Section 2.6.7** for related discussion).

Potential noise impacts from the revised field alternative were also assessed at the proposed future residential housing units planned by LIHI. The sound levels at the 70 new units proposed for a location west of Sports Field Drive are generally lower with the revised field alternative than with the original proposed action, although the maximum daytime noise limit (L_{max}) and the nighttime hourly L_{25} and L_{max} noise limits could be exceeded after 10 PM during the spring and summer activities.

At the proposed location for 28 new residential units south of NE 65th Street, the predicted sound levels with the revised field alternative are essentially the same as for the Radford Court units discussed previously. For this location, the predicted sound levels with both the proposed action and the revised field alternatives occasionally exceed the Seattle noise limits, depending on the season and time of day. If these units are constructed in the future the Parks Department, as part of its agreement with LIHI, has agreed to conduct noise monitoring of the sports field activities to ensure that the future sound levels meet the Seattle noise limits. If found to be necessary, mitigation measures would be applied to ensure that the limits are met during both daytime and nighttime hours.

2.6.3 Traffic Noise Impacts

Section 3.6.2.2 of the Final EIS addressed the potential operational noise impacts from traffic associated with the original proposed action. The Final EIS reported that on-site traffic noise associated with sports field use would reach a level of 39 dBA near Building 224 in late evening hours, and would not increase the overall on-site sound level above that produced by sports field noise alone. The Final EIS also reported that traffic noise associated with sports field use would be barely discernible in off-site areas in the hillside residential communities to the west and south of the SPMP site.

Sports field operation under the revised field alternative would result in no change in overall traffic volumes before 10 PM, and could result in a *decrease* in traffic volumes after 10 PM, when compared to the original proposed action. This is due to the operational limitations that would allow only five fields to be lit after 10 PM, which would result in a substantial reduction in the number of users and vehicles present on the site between 10 and 11 PM.

Given that the revised field alternative would also result in only a modest revision to traffic patterns on the off-site roadways, off-site traffic noise impacts for the revised field alternative are anticipated to be the same as or lower than the impacts identified in the Final EIS. Because no significant noise impacts were identified at off-site residential receivers in the hillside residential communities to the west and south of the SPMP site for the original proposed action, no significant noise impacts at these off-site residential receivers are expected with the revised field alternative.

The revised field alternative could, however, result in revisions to the on-site traffic flows and could potentially change the noise impacts at on-site and adjacent off-site (i.e., Radford Court) residential

receivers. Therefore, the expected consequences of the on-site traffic revisions are discussed in more detail below.

As discussed in the Final EIS, during nighttime hours Sand Point Magnuson Park currently generates little traffic and other traffic on area roadways decreases. Therefore, the greatest potential for traffic noise impacts would occur during nighttime hours, particularly after 10 pm. The original noise analysis for the proposed action assumed that approximately 9 fields would likely be scheduled for use between 10 and 11 PM, while only 5 fields would be in use after 10 PM under the revised field alternative. Therefore, the revised field alternative would represent a decrease in traffic noise impacts at on-site residential receivers after 10 PM when compared to the original proposal. To fully assess the differences in traffic noise at Building 224 due to the modified on-site traffic patterns associated with the revised field alternative, this revised on-site traffic noise analysis assumes full use of 10 fields between 10 and 11 PM.

Traffic noise impacts at on-site residential receivers in Building 224 were estimated by calculating the traffic noise levels on Sports Field Drive and comparing these to Seattle's noise limits. Because Sports Field Drive is considered a park road, noise from traffic traveling on this roadway would not be exempt from meeting the limits. To ensure the traffic noise analysis is conservative, it was assumed all traffic from nighttime games would exit the site in a one-hour period between 10:30 and 11:30 PM. This would include five baseball games and up to four soccer games. According to the traffic noise study, each baseball game would involve approximately 30 vehicles and each soccer game approximately 35 vehicles, for a total of 290 vehicles exiting in a one-hour period. In determining how many vehicles might pass Building 224 between 10:30 and 11:30 PM, the following assumptions were applied:

- Approximately 140 vehicles were assumed to use the North Fields and North Sand Point parking lots (all vehicles from players on Fields 6 and 12 through 14). All but 10% of these vehicles were assumed to exit via the nearest exit at NE 74th Street.
- Approximately 150 vehicles were assumed to use the South Fields parking lot (all vehicles from Fields 7 through 11). All but 10 % of these vehicles were assumed to exit via the nearest exit at NE 65th Street.
- Vehicles traveled at 20 mph on the site.
- Because of the configuration of Building 224, each receiving residential window would have only a partial view of the roadway.

The above assumptions result in an estimated 15 vehicles traveling north on Sports Field Drive past Building 224 and 14 vehicles traveling south to exit the Sand Point Magnuson Park facility. Traffic noise levels were calculated using the FHWA NOISE model. The resulting traffic noise level (L_{eq}) at the nearest residences in Building 224 was 35 dBA, or approximately 4 dBA lower than the level calculated for the original proposed action. Therefore, the revised field alternative would result in lower traffic noise impacts to Building 224 residents than the original proposed action. Also, adding the predicted sports field sound level (L_{25}) of 44 dBA from all athletic activities to the predicted traffic noise level of 35 dBA results in an overall sound level of 45 dBA, which would meet Seattle's nighttime noise limits. The Final EIS analysis of the proposed action identified a predicted overall hourly sound level (L_{25}) that *exceeded* the nighttime noise limit.

Please note that adding the predicted traffic noise L_{eq} to the predicted athletic field noise L_{25} does not necessarily result in an accurate prediction of the overall L_{25}. Unfortunately, the noise prediction tool for

traffic noise does not calculate an L_{25}. Therefore, the predicted overall level of 45 dBA is simply the best estimate of the overall L_{25} using the available tools. Also, the athletic events would end at staggered times, with only a portion of games still in play while some of the vehicles exit the site. This scenario is too complicated to allow for noise predictions, however, and the scenario presented above should be considered "worst-case" with somewhat overstated overall sound levels.

The project description for the revised field alternative also notes the possibility of additional gating of roadways to alter vehicular circulation patterns after 10 PM, including the possibility of gating Sports Field Drive to limit cross-park vehicular traffic (see **Section 1.4.5**). Should this measure be taken, no vehicles would travel on Sports Field Drive past Building 224 after 10 PM and the resulting traffic noise levels at Building 224 would be much lower than discussed above.

In addition to assessing the potential traffic noise impacts to Building 224 from on-site traffic, the revised field alternative could result in traffic noise impacts at the Radford Court units nearest NE 65th Street due to vehicles exiting from the revised South Fields parking lot. NE 65th Street, unlike Sports Field Drive, is considered a public roadway, and the Seattle noise limits do not apply to traffic traveling on public roadways. Therefore, traffic noise impacts at the nearest Radford Court units were estimated by calculating the potential increase in traffic noise with the revised field alternative. The following traffic assumptions were used for this assessment:

- Approximately 150 vehicles were assumed to exit the South Fields parking lot between 11 p.m. and midnight (all vehicles from Fields 7 through 11), and would travel on NE 65th Street past the Radford Court units.

- Vehicles traveled at 20 mph on the site.

- There is currently little or no traffic traveling on NE 65th Street between 11 p.m. and midnight. Therefore, the predicted traffic noise level at the Radford Court unit with the revised field alternative was compared to the measured sound level (hourly L_{eq}) captured between 11 p.m. and midnight at SLM2, described in Table 2-3.

The predicted sound level of 150 vehicles exiting on NE 65th Street between 11 p.m. and midnight was 44 dBA at the nearest Radford Court unit. The existing measured L_{eq} during that hour was 43-44 dBA, resulting in a calculated overall hourly L_{eq} of between 46 and 47 dBA with the addition of the predicted traffic noise. This could result in an increase of approximately 3 dBA over the existing measured levels in the project vicinity, which would be barely discernible in an active outdoor noise environment and would not constitute a significant noise impact.

2.6.4 Cumulative Impacts

The noise predictions for the revised field alternative do not identify any additional noise impacts at off-site locations on the hillsides overlooking the SPMP site over those identified in the Final EIS for the original proposed action. The noise predictions for the revised field alternative do identify noise impacts at the nearest Radford Court units not previously identified in the Final EIS for the original proposed action. However, the potential noise impacts of the revised field alternative indicates that the predicted noise levels from sports field operations and traffic at all receiving locations, including the nearest

Radford Court units, alternately increase or decrease relative to the original proposed action, depending on the season and time of day. Therefore, the overall impacts of the revised field alternative relative to the original proposed action remain similar, and the Final EIS discussion of cumulative noise impacts (Section 3.6.4) remains applicable to the revised field alternative.

2.6.5 Mitigation Measures

The construction noise mitigation measures identified in Section 3.6.5.1 of the Final EIS would also apply to the revised field alternative.

Section 3.6.5.2 of the Final EIS identified a number of possible mitigation measures to address the operational noise impacts from the proposed action. Some of those measures, such as rotating and/or rearranging the location of the sports fields, are incorporated in the revised field alternative. Specifically, Field 11 has been rotated to move the backstop/home plate (the primary noise source) to the north, away from the residential units located south of 65th Street, to reduce noise impacts on those units. The mitigation measure of implementing a noise monitoring program is still being proposed to ensure that activities comply with the Seattle noise ordinance. If shown to be necessary by the monitoring plan, another mitigation measure identified in the Final EIS and still applicable is the restriction of play on some sports fields after 10 PM if necessary to meet Seattle's noise limits. The use of loudspeakers, air horns and similar devices is already prohibited at all athletic events at City parks, unless authorized by permit for specific events and times, and is included in **Section 1.4.9** as an operational characteristic of the project description. The mitigation measure of installing resilient material on the baseball field backstops still applies to the revised field alternative and will be evaluated by the Parks Department. Additional mitigation could include gating Sports Field Drive to prevent traffic from traveling on portions of this roadway after 10 PM, and constructing berms or barriers along the north side of NE 65th Street in the vicinity of the baseball fields. Also, as part of the LIHI settlement agreement, the Parks Department would work closely with LIHI to ensure that noise from future sports field activities meets the Seattle noise limits at all nearby residences.

2.6.6 Significant Unavoidable Adverse Impacts

Section 3.6.6 of the Final EIS addressed significant unavoidable adverse noise impacts associated with the original proposal. Those impact conclusions remain applicable to the revised field alternative; the updated impact analysis conducted for this Addendum identified no additional significant unavoidable noise impacts at nearby residential receivers.

As with the impacts identified in the Final EIS for the original proposed action, construction activities associated with the revised field alternative would result in unavoidable noise impacts within the neighboring community. Construction noise would be audible on an intermittent basis, primarily during the heavy earthmoving portions of four construction phases. Based on required compliance with the City's noise ordinance and large distances between much of the construction site and the affected residences, these impacts would not likely be significant.

Predicted operational noise levels with the revised field alternative at the off-site hillside residential locations (i.e., Windermere, Park Point, and View Ridge) would easily meet Seattle's noise limits, both the daytime and more stringent nighttime limits, and would generally be below or within the range of

existing noise levels. Therefore, significant operational noise impacts from the proposal are not anticipated at these off-site residential receivers.

The Final EIS indicated that operation of the new park resources under the original proposed action could create long-term, intermittent noise impacts at the nearest on-site residential receivers to the sports fields (i.e., SPCHA Building 224) that would be unavoidable. The updated noise analysis for the revised field alternative identified no new significant noise impacts at SPCHA Building 224, and determined that noise levels in the key spring/summer period would be noticeably lower than predicted for the original proposal. The maximum predicted spring/summer noise levels at Building 224 with the revised field alternative are 4 to 9 dBA less than the maximum estimated for the original proposal, and operation under the revised field alternative would meet the daytime and nighttime noise limits in all seasons. Therefore, the mitigation features incorporated in the revised field alternative would considerably reduce, but not eliminate, the on-site residential noise impacts identified in the Final EIS for the original proposal.

Predicted operational noise levels at the Radford Court units just south of NE 65th Street (and at the nearby location of 28 LIHI units proposed for construction) exceed the Seattle noise limits by 4 to 8 dBA on occasion, depending on the time of day and season of play. Predicted maximum sound levels for the original proposed action exceeded the Seattle noise limits after 10 PM (when the maximum sound levels allowed by the ordinance decrease) for both the spring/summer and fall/winter seasons. Predicted maximum sound levels for the revised field alternative would likewise exceed the Seattle noise limits after 10 PM during the summer/spring season (although the actual sound levels on the fields would be consistent before and after 10 PM), but not during the winter/fall season. Compared to the proposed action alternative discussed in the Final EIS, the predicted spring/summer maximum sound levels after 10 PM are actually somewhat higher for the revised field alternative. Several potential mitigation measures proposed in the Final EIS and this addendum, including rotation of Field 8, installation of resilient material on backstops, implementation of a noise monitoring program, construction of berms or barriers between Fields 8 and 11 and NE 65th Street, and the potential restriction of hours of operations on some fields could be used to ensure that the sound levels received at these units from SPMP activities would not exceed Seattle's noise limits. Therefore, noise impacts at this location would be avoidable.

2.7 LAND AND SHORELINE USE

2.7.1 Land Use Impacts

Section 3.7.1.2 of the Final EIS identified the impacts to land and shoreline use expected to result from construction and operation of the proposed project. The specific issues addressed included direct land use impacts such as intensification of uses on site, changes in types of land uses on site, increased human use of the site, potential displacements, indirect land use impacts such as changes in land use patterns in the surrounding community as a result of the proposal, construction-related impacts, and the need for increased parking on site. No significant impacts related to land and shoreline use were identified.

The revised field alternative incorporates minor design changes to the sports field component of the original proposal analyzed in the Final EIS; it contains the same number and type of facilities as the original proposal, as well as the same amount of total project acreage, only in a different configuration on the sports field portion of the site. Some of the project acreages for land use categories have changed slightly under the revised field alternative, as indicated in **Table 1-1**. Compared to the original proposal, the area devoted to park, lawn and planting would increase by 1.7 acres, the area devoted to paths would decrease by approximately 0.8 acres, and the area used for parking would decrease by approximately 0.9 acres under the revised field alternative. These changes are not significant within the context of land use allocations and impacts within the project site or the overall park facility, and would not change the direct or indirect land use impact results stated in the Final EIS. Therefore, land and shoreline use impacts associated with the revised field alternative would be essentially the same as those described for the original proposal in the Final EIS.

The Final EIS discussions of cumulative impacts, mitigation measures and significant unavoidable adverse impacts remain applicable to the revised field alternative. The Final EIS identified no significant unavoidable adverse land use impacts for the original proposal. This conclusion remains applicable to the revised field alternative.

2.7.2 Land Use Plans, Policies and Regulations

Section 3.7.2 of the Final EIS addressed the consistency of the original proposal with applicable land use plans, policies and regulations. The Final EIS determined that the original proposal was consistent with the City of Seattle Comprehensive Plan (2000) and the Seattle Parks and Recreation Plan (2000); the City's Land Use and Zoning Code, including the Sand Point Overlay District and the Shoreline Overlay District; the City's regulations for Environmentally Critical Areas; and the Sand Point Physical Development Management Plan (City of Seattle, 1997b) and the Sand Point Historic Properties Reuse and Protection Plan (EDAW, Inc., 1998). The sports field design changes and operational limitations incorporated in the revised field alternative represent minor changes to the original proposal with respect to consistency with land use plans and policies, and do not require modifying any of the corresponding conclusions presented in the Final EIS. Through reconfiguring the parking areas and shifting locations of specific field uses, the revised field alternative would provide greater setback distances and improved buffering from both the on-site transitional housing to the west and the wetland/habitat complex to the east. Therefore, the revised field alternative would also be consistent with applicable land use plans, policies and regulations, and the content of Section 3.7.2 of the Final EIS remains applicable to the revised field alternative.

2.8 AESTHETICS

Section 3.8.2 of the Final EIS identified the aesthetic impacts (primarily to existing views in and near the project site) expected to result to during daylight hours from construction and operation of the proposed project. The visual effects of the project on these same views at night would be dominated by the lighting elements of the proposal, which are addressed in **Section 2.9 Light and Glare**.

The specific types of aesthetic issues addressed in the Final EIS included impacts to views from Magnuson Park, which is included in the City of Seattle SEPA code as a designated viewpoint; impacts to views from scenic routes near the project site (Sand Point Way NE and NE 65th Street); and views to and of the site from numerous points in the surrounding community. As indicated in the Final EIS, the sports field lighting systems would be the most prominent visual element of the proposed project in most of the affected views, and the most noticeable source of visual impacts. The sports field surfaces, particularly the surfaces for the 11 fields with synthetic turf, and new parking lots would also be sources of visual change evident in some of the affected views.

The revised field alternative incorporates minor design changes to the sports field component of the original proposal analyzed in the Final EIS; it contains the same number and type of sports field facilities, as well as the same amount of total project acreage, only in a different configuration on site. With respect to the sports field lighting systems, the most prominent source of potential visual impact associated with the project, the revised field alternative reflects a net reduction compared to the original proposal of 2 light standards (from 80 to 78) and 12 luminaires (from 640 to 628). Given the small change in lighting system quantities, the extent and magnitude of visual impacts from the lighting systems with the revised field alternative would be essentially the same as described for the original proposal. Similarly, the total area of synthetic-turf sports fields would be the same with the revised field alternative as for the proposed action, and the area of parking lot surface would be only slightly reduced. Therefore, the overall aesthetic impacts associated with the revised field alternative would be essentially the same as those described for the original proposal in the Final EIS.

The Final EIS discussions of cumulative impacts, mitigation measures and significant unavoidable adverse impacts for aesthetics (Sections 3.8.4, 3.8.5 and 3.8.6, respectively) remain applicable to the revised field alternative.

2.9 LIGHT AND GLARE

The revised field alternative incorporates changes to the design and physical characteristics of the lighting systems of the proposed action. The lighting technology to be used at each field remains the same as described for the original proposal in the Final EIS, with full-cutoff luminaires to be used for all aspects of the sports field lighting design except for the use of shielded floodlights Fields 7 and 8 (baseball/slow-pitch softball). The revised field alternative includes somewhat smaller dimensions for Field 5, however, allowing for a corresponding reduction in the quantity of poles and luminaires used to light that field. The total number of athletic field light poles for the revised field alternative is 78, which is a reduction of 2 light poles compared to the original proposal. Similarly, the total number of athletic field luminaires with the revised field alternative is 628, or 12 less than the original proposal. The only other lighting system change relative to the original proposal resulted from reconfiguration of the parking lots, through which the parking lot lighting system quantities were reduced by 2 poles and 1 luminaire.

A key element of the revised field alternative is the rearrangement of the individual fields within the sports complex area. Through reconfiguration of the parking areas and the locations of specific field uses, the lighted fields have been relocated to provide greater setback distances from both the existing on-site transitional housing to the west and the wetland/habitat complex to the east. The general positions of the baseball fields and soccer/rugby fields have been reversed, to have the baseball fields (Fields 7-11) clustered on the south end and the soccer/rugby fields (Fields 5-6 and 12-15) on the north end of the athletic complex. By shifting the locations of the full-cutoff and shielded-conventional lighting systems, the revised field alternative would modify the patterns of spill light and glare from the sports fields, as discussed below under the respective headings.

In addition to these design changes, the revised field alternative includes operating provisions that would limit the number of fields that could be lighted and in use during the later evening hours. The Final EIS evaluated the potential light and glare impacts of the proposed action based on the assumed application of the standard Parks Department policy of scheduling lighted fields for use as late as 11 PM. As described in **Section 1.4.9**, however, the revised field alternative incorporates four specific operational measures relating to timing and scheduling constraints on sports field and security lighting. With respect to possible changes in the level of expected light and glare impacts, the most notable measures are that lighting on Field 5 would be turned off no later than 9 PM year round while no more than 5 of the remaining 10 lighted fields would be scheduled for use until 11 PM (i.e., lighting at 5 of the fields would be turned off by 10 PM). Compared to the original proposal, these measures would reduce the number of fields that could be lighted and in use between 9 and 10 PM and, particularly, between 10 and 11 PM.

2.9.1 Spill Light

The Final EIS (Section 3.9.2.1) described spill light levels expected to result from the proposed action and related them to the Parks Department guideline that the maximum lighting level at the nearest residential property line should not exceed 0.8 vertical foot-candles. The original analysis concluded that the proposed action would generally not produce adverse spill lighting impacts for residential uses adjacent to the project site, but did identify that for Field 14, the field closest to the Radford court complex, the 0.8 vertical foot-candle limit relative to the Radford court property line would need to be verified during detailed engineering design for the sports field lighting systems. The majority of the spill lighting from

the proposed action would fall immediately adjacent to the fields and within park boundaries. Some spill light would extend into a portion of the wetland habitat complex to the east.

The increased setback distances around the fields would reduced the extent of spill light falling into the wetland/habitat complex to the east, the on-site residential area to the west and residential area to the south. **Figure 2-1** is a direct comparison of the extent of spill lighting for both the original proposed action and the revised field alternative**.** This figure indicates the extent of spill lighting levels of 1.0, 0.8 and 0.2 foot-candles for the revised field alternative and the original proposal, and illustrates the changed spill light levels under the revised field alternative. The changes in spill light patterns are not large and include both positive and negative changes, depending upon specific location.

The revised field alternative would also revise the potential light trespass conditions in the area along the south property line. Under the revised field alternative no area of the adjacent property south of 65th Street would be within the range of 1.0 foot-candle of spill light. The area near the property line in this location that would exceed the guideline of 0.8 foot-candles maintained by the Parks Department has been reduced by approximately 70% under the revised field alternative, compared to the original proposal. For Field 11 (little league), the field closest to the Radford Court Complex and LIHI future development site, the 0.8 vertical foot-candle limit relative to their property lines would continue to need to be verified during detailed engineering design for the sports field lighting systems.

The operational limitations on the hours of usage of the athletic field lights would also reduce the cumulative duration and extent of spill lighting and the associated impacts. While spill light from the sports fields would not exceed the 0.8 foot-candle guideline at Building 224 (the existing transitional housing facility) even under the original proposal, turning off the lights at Field 5 (the closest field to Building 224) no later than 9 PM would reduce the total hours during which low levels of spill light would be cast toward the on-site housing. In addition, the imposition of a 10 PM lighting curfew at 5 of the remaining 10 athletic fields would reduce the total duration of measurable spill light along the perimeter of the athletic field complex. The revised field alternative does not specify which fields would not be lighted past 10 PM, so it is not possible to relate this change in spill light effects to specific areas on or adjacent to the project site.

2.9.2 Glare

The Final EIS indicated that the proposed action would produce a significant unavoidable impact of direct glare exposure to the transitional housing located west of Sports Field Drive. The Final EIS identified the shielded conventional floodlights associated with Fields 7 and 8 (baseball/slow-pitch softball) as the primary source of the direct glare. The proposed action would also produce off-site direct glare exposure from the athletic field lights. The existence and amount of direct glare visible at any given location in the surrounding area would depend on the elevation of the specific viewing point and the presence of intervening vegetation and/or structures that would block direct sightlines to the field lights.

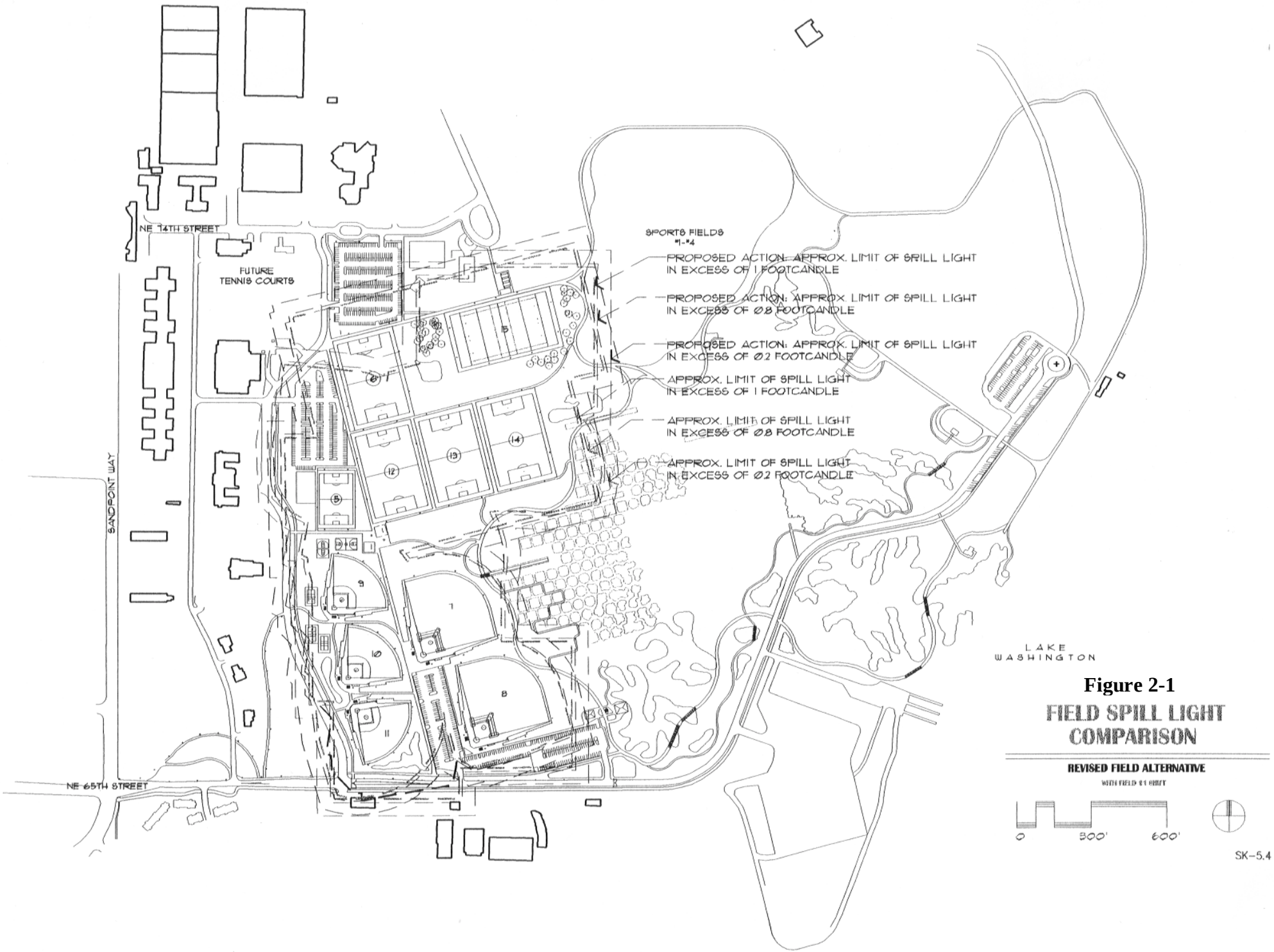

Figure 2-1

FIELD SPILL LIGHT COMPARISON

The revised field alternative would result in lower levels of glare impacts compared to those identified in the Final EIS for the original proposed action. The changes to the glare impacts outlined in the Final EIS are associated with the relocation of the shielded conventional floodlights proposed for use at the baseball/slow-pitch softball fields (Fields 7 and 8). Because of their angled orientation to the fields, the shielded conventional floodlights would produce more glare than would the full-cutoff luminaires that would be used with the other field lighting systems at the park. The full-cutoff luminaires provide more extensive shielding of the lamp and reflector compared to the shielded floodlights. In the original proposal Field 7, with shielded conventional floodlights, is the field closest to the transitional homeless housing facility west of Sports Field Drive and is the most prominent source of glare impacts. In the revised field alternative Fields 7 and 8 are shifted to the east and south from their original proposed location while Field 5, a mod soccer field with full-cutoff luminaires (as well as fewer light standards and luminaries), is the field closest to the transitional housing facility. This shift in the field locations would reduce the intensity of the on-site glare exposure at the existing transitional housing facility.

The revised field alternative would also provide a minor reduction in the intensity of off-site glare exposure affecting the community to the west of Sand Point Magnuson Park. The slight increase in distance from Fields 7 and 8 to the residential areas west of Sand Point Way could contribute to a small reduction in glare intensity, and might reduce the potential for direct glare exposure at individual homes to the west that are situated near the 125-foot elevation contour. In addition, mature vegetation and existing structures in the southwest corner of the park might block some of the glare originating from Fields 7 and 8 in their revised location.

Conversely, the revised field alternative would locate Fields 7 and 8 somewhat closer to the residential area south of Sand Point Magnuson Park. This would provide for a corresponding increase in the intensity of direct glare exposure to the residential areas south of the athletic complex, specifically the Radford Court housing complex; the Final EIS indicated some of the units in the northerly and easterly portions of the Radford Court complex would have exposure to direct glare from the field lighting. However, the distance between the closest shielded conventional lights and existing housing in the revised field alternative is greater than the closest shielded conventional lights and existing housing in the proposed action; therefore, the revised field alternative would result in a minor reduction of glare impacts from the shielded conventional fixtures on the closest residential units when compared to the proposed action. The Final EIS also noted that trees and buildings would block views and glare exposure in some locations at Radford Court. In addition, this complex has been developed with extensive and bright exterior lighting, which could mask glare originating from the sports fields. On balance, the possible minor decrease in the intensity of off-site glare exposure to the west of the park would likely be essentially offset by a minor increase in off-site exposure to the south, resulting in off-site glare intensity that would be essentially same as identified for the original proposal.

The limitations on the hours of use of the lighted athletic fields would also reduce the levels of glare impacts relative to the original proposal, by reducing the frequency and/or duration of direct glare experienced at potential receiving locations. As described in **Section 1.4.9**, the Field 5 lights would not be used after 9 PM and less than half of the sports field lights would operate after 10 PM. Operation with an earlier curfew for the lights at 6 of the athletic fields would reduce the total hours of possible direct glare exposure, and would have a noticeable effect primarily on the occasions when the lights at Fields 7 and 8 would be turned off at 10 PM.

2.9.3 Surface Luminance

The Final EIS reported that the proposed action would significantly increase the average surface luminance within the park. The primary source of the increased luminance would be the light reflected off of the synthetic athletic fields that are to be lighted. An additional large area of luminance would be produced with the reflected light off of the surfaces immediately adjacent to the intentionally lighted fields that receive spill light. The Final EIS indicated that 116 acres within the park would be subject to increased luminance produced by the sports field lights, and that light reflected from surfaces in the park would travel in all directions to surrounding areas. The increased surface luminance would result in reflected glare and sky glow, and could make it difficult for off-site observers to view dark elements within or adjacent to the park.

The revised field alternative includes a small reduction in the number of light standards and luminaires used to light Field 5 (mod soccer), with a corresponding reduction in the overall quantity of athletic field luminaires from 640 to 628. This design change would slightly reduce the amount of area intended for illumination and the amount of light produced at Field 5, with a corresponding very slight reduction in the environmental impacts associated with surface luminance at the park. In addition, the limitations on the hours of lighted field use would result in less than half of the sports field lights operating after 10 PM. This operational measure would substantially reduce the amount of surface luminance from the project during the later evening hours, compared to the original proposal, and would represent a moderate overall reduction in the level of surface luminance impacts from the sports fields.

2.9.4 Sky Glow

Section 3.9.2.4 of the Final EIS reported that the proposed action would increase the glow of the sky in the vicinity of the park at times when the field lighting systems were in use, and that this effect might be observable at a distance of up to several miles from the park. The proposed use of full-cutoff luminaires at 9 of the 11 fields would dramatically reduce the amount of light delivered into the atmosphere, by eliminating most of the direct light emitted above the luminaries, while the shielded conventional floodlights at Fields 7 and 8 would be the only direct source of light contribution to sky glow. The primary contribution to sky glow from the project would be the light reflected off the lighted synthetic fields and immediately adjacent areas that received spill light.

The revised field alternative would slightly reduce the amount of sky glow that would be produced, through the reduction in number of luminaires and the amount of area that would be lighted at Field 5. With this design change, the revised field alternative would produce less light reflected up into the atmosphere and would provide for a very slight reduction in the sports field contribution to sky glow in the vicinity of the park.

As discussed previously, the revised field alternative includes limitations on the hours of lighted field use that would result in less than half of the sports field lights operating after 10 PM. This operational measure would reduce the amount of direct and reflected light contribution to sky glow from the project during the later evening hours, compared to the original proposal, and would reduce the duration of full-scale project contribution to sky glow. This change in operating characteristics represents a moderate overall reduction in the level of sky glow impacts from the sports fields.

2.9.5 Cumulative Impacts

The discussion of cumulative impacts presented in Section 3.9.4 of the Final EIS remains applicable to the revised field alternative. The Final EIS described the expected light and glare impacts of the project in relation to other past, present and foreseeable future sources of light and glare impacts, and noted that the sports field lighting would dominate over the visibility of lighting associated with other recent or planned projects. While the revised field alternative would result in reduced light and glare impacts relative to the original proposal, the sports field lighting would still represent the dominant source of light and glare impacts in the area surrounding Sand Point Magnuson Park.

2.9.6 Mitigation Measures

The Final EIS (**Section 3.9.5**) identified several measures to mitigate light and glare impacts that were incorporated into the design for the lighting systems proposed for use in the project. These measures included use of full-cutoff lighting fixtures wherever possible and compliance with Parks Department requirements for maximum allowable light trespass levels. The Final EIS also identified a number of potential mitigation measures that might reduce the level of expected light and glare impacts. These measures included restricted hours of operation, shielding to block direct glare exposure, higher poles and luminaire mounting heights, coordinating with plans for additional on-site transitional housing, and possible design changes such as reorienting the fields (7 and 8) with shielded conventional floodlights.

The revised field alternative incorporates several of the measures identified in the Final EIS as possible additional measures to mitigate light and glare impacts. Specific elements of the revised field alternative include restricted hours of operation, coordinating with SPCHA plans for additional on-site transitional housing, and reconfiguring the sports field layout to reduce the direct glare exposure at the Building 224 housing facility. The mitigation measures that have been incorporated into the revised field alternative would result in reduced levels of light and glare impacts relative to the original proposal, as discussed above in **Sections 2.9.1** through **2.9.4**.

Other identified measures remain available for consideration as the City reaches a decision on the proposal. An additional possible mitigation measure has been identified, specifically the inclusion of a "hybrid" system for lighting Field 11, the little league field closest to the existing and possible future SPCHA transitional housing to the south of NE 65th Street. This hybrid system would use shielded conventional fixtures along the first- and third-base lines (as opposed to full-cutoff fixtures, as proposed), and thereby gain the benefit of reduced spill light impacts on properties to the south of NE 65th. The outfield poles would continue to use full-cutoff fixtures, as proposed, to minimize glare impacts to properties to the south of NE 65$^{th.}$

2.9.7 Significant Unavoidable Adverse Impacts

The original proposed action would have resulted in several types of significant, adverse unavoidable light and glare impacts, as discussed in Section 3.9.6 of the Final EIS. These impacts included direct glare exposure to the on-site residential facility in Building 224, adjacent to the project site, and the increased surface luminance and sky glow that would be evident over a more widespread area.

The intent of the sports field design changes and operational measures incorporated into the revised field alternative is to mitigate the direct glare impacts at the existing on-site housing, and the proposed additional transitional housing, to an insignificant level. While the accomplishment of this objective could not be known with certainty without a post-construction evaluation, a basic presumption of the settlement agreement between the Parks Department and LIHI is that light and glare impacts to the on-site housing could be reduced to an acceptable level through the design and operation measures featured in the revised field alternative. It is recognized that some additional glare impacts may occur south of NE 65th Street.

Compared to the original proposal, the revised field alternative would result in a reduced level of light and glare impacts associated with surface luminance and sky glow. The most notable effect of the revised field alternative would be to reduce the number of hours in which the sports fields were in full operation and generating surface luminance and sky glow from 11 field lighting systems. Even with this change, however, the revised field alternative would still produce significant, unavoidable light and glare impacts associated with surface luminance and sky glow.

2.10 RECREATION

Section 3.10.2 of the Final EIS identified the impacts expected to result to recreational uses on and in the vicinity of Sand Point Magnuson Park from construction and operation of the proposed project. The types of specific impact issues addressed included on-site disruption or displacement of existing recreational uses during construction, capacity analysis for the proposed facility, organized use versus informal use of proposed park facilities, increased intensity of use of the site and site vicinity for recreational purposes, and a change in use patterns on the site due to redevelopment of park facilities. The Final EIS indicated the proposed action would result in temporary disruption and displacement of existing park uses during construction, a major expansion in capacity and use levels for structured and informal athletic field use, substantial capacity increase and quality improvement for walking/hiking and passive park uses, and a general intensification and/or redirection of human use patterns within the project site. The Final EIS did not identify any of these expected changes as significant unavoidable adverse impacts.

The revised field alternative incorporates minor design changes to the original proposal analyzed in the Final EIS; it contains the same number and type of sports field facilities and the same instantaneous capacity, as well as the same amount of total project acreage, only in a different configuration within the sports field component of the project site. However, the revised field alternative includes a few operational changes that would result in a limitation of daily, weekly, seasonal and annual capacity for sports field use. Unlike the original proposal, the duration of lighting for some of the sports fields would be reduced under the revised field alternative. Under this alternative, Field 5 would have lighting nightly until 9 PM and five other sports fields would have lighting nightly until 10 PM. The original proposal included lighting nightly on all lighted fields until 11pm. Therefore, the revised field alternative would result in fewer sports field users than the original proposal within any given period of time, but would still represent a major expansion in capacity and use levels for structured and informal sports field uses. The other types of changes in recreational resources and use patterns identified in the Final EIS would occur at essentially the same levels under the revised field alternative. No significant impacts related to recreational use were identified.

The cumulative impact assessment discussed in Section 3.10.4 of the Final EIS remains applicable to the revised field alternative, as do the mitigation measures described in Section 3.10.5. The Final EIS identified no significant unavoidable adverse impacts for the original proposal. The proposal would result in a significant, unavoidable increase in opportunities for programmed and informal recreational activities and a significant increase in the use of Sand Point Magnuson Park, but those changes are considered to be positive and consistent with the objectives identified for the project. This conclusion remains applicable to the revised field alternative.

2.11 HISTORIC AND CULTURAL PRESERVATION

Section 3.11.3 of the Final EIS identified the impacts expected to result to historic and cultural resources from construction and operation of the proposed project. The types of impact issues addressed included demolition of historic resources (specifically, the Hobby Shop at the corner of NE 65th Street and Sand Point Way NE), impacts to historic view corridors and potential disturbance and/or damage to undiscovered archaeological resources that may be encountered during construction activities on site. The revised field alternative incorporates minor design changes to the original proposal analyzed in the Final EIS; it contains the same number and type of facilities, as well as the same amount of total project acreage, only in a different configuration within the sports field component of the project site. Therefore, impacts associated with historic and/or cultural resources for the revised field alternative would be the same as those described in the Final EIS for the original proposal.

The cumulative impact assessment discussed in Section 3.11.5 of the Final EIS remains applicable to the revised field alternative, as do the mitigation measures described in Section 3.11.6. The Final EIS identified no significant unavoidable adverse impacts for the original proposal. These conclusions remain applicable to the revised field alternative.

2.12 TRANSPORTATION

This section describes the expected future transportation conditions within the vicinity of the project site under the revised field alternative in relation to those identified for the proposed action in the Final EIS for the Drainage, Wetland/Habitat Complex and Sports Fields/Courts Project. The primary modifications to the original proposal that could affect the original transportation analysis include:

- modification to the location of parking spaces relative to the athletic fields;
- the addition of a single primary pedestrian way running north-south and tying the entire sports complex together; and
- relocation of the primary pedestrian entry to the fields, courts and wetland/habitat complex from Sports Field Drive to NE 65th Street.

2.12.1 Construction Impacts

Section 3.12.4.2 of the Final EIS described construction-related transportation impacts expected to result from the proposed action. The revised field alternative includes changes to the configuration of the sports fields and courts, but would not change the type, number, size, or capacity of these facilities. Therefore, construction impacts from the revised field alternative would be the same in type, extent, duration and intensity as those described in the Final EIS. The phasing plan for the revised field alternative involves slight differences in the specific on-site location of activity at given times in the construction period, but this would not change the level of construction impacts identified in the Final EIS.

2.12.2 Operation Impacts

Sections 3.12.4.3 through 3.12.4.13 of the Final EIS identified the transportation-related impacts expected to result from operation of the proposed project. The types of impact issues addressed included off-site traffic conditions, on-site access and circulation, and on-site parking. In general, the types and levels of transportation impacts discussed in the Final EIS were based primarily on the operating characteristics of the proposed sports fields, specifically on the field capacity, the travel patterns of the field users and the number of users present at peak periods. Because the revised field alternative includes the same number, type and capacity of sports fields as the original proposed action, and the same general location of the sports field complex within the project site, the number of users and traffic characteristics at peak times would be the same as for the proposed action. The design and operational changes incorporated in the revised field alternative would result in some minor changes in off-site traffic, on-site access and circulation and parking conditions relative to the original proposed action, as discussed below.

The revised field alternative would have exactly the same influence as the original proposed action on some transportation conditions, such as transit service; for such cases, the findings documented in the Final EIS are unchanged and the topics are not addressed below.

2.12.2.1 Off-Site Traffic

Trip Generation and Distribution

The modifications to the sports field configuration of the proposed development plan would not result in any net loss or gain in the number and capacity of athletic facilities at the project site, and would not affect the peak trip generation characteristics of the proposal. Similarly, the modifications to the operations of the sports fields (i.e., the limitations on field lighting hours) would not result in any changes to the trip generation originally estimated for the weekday PM peak hour. Therefore, the weekday PM peak hour trip generation projected for the revised field alternative is anticipated to be the same as originally projected for the proposed action in Section 3.12.4.3 of the Final EIS.

For the trip distribution component of the Final EIS analysis for the proposed action, it was assumed that sports field users (and other park users) would enter and leave the park by the entrance closest to their origination or destination, as is common practice in transportation planning. Therefore, the reconfiguration of the parking lots serving the sports fields would not require re-assignment of vehicle trips or reevaluation of intersection operations for any of the study intersections. Elimination of the Sports Field Drive parking lot from the original proposal, and the corresponding relocation of those parking spaces to the North Sand Point, North Fields and South Fields parking lots (situated at either end of Sports Field Drive) might result in some drivers traveling slightly longer on Sports Field Drive. Other visitors would be driving a slightly shorter distance, however, depending on their origin and internal destination. The project trip distribution reported in the Final EIS, which was based on prevailing traffic patterns, assumed a slightly greater percentage of field and park users traveling to-and from the north (60%) compared to the south (40%). Therefore, by shifting more parking spaces to the north, the revised field alternative might result in slightly less internal traffic circulation than would the original proposal.

The project description for the revised field alternative (see **Section 1.4.5**) also notes the possibility of additional gating of roadways to alter vehicular circulation patterns during later evening hours, including the possibility of gating Sports Field Drive to limit cross-park vehicular traffic. Should this measure be taken, it might modify the travel patterns from the sports field parking lots to Sandpoint Way. This might result in shifting where some vehicles enter Sandpoint Way from NE 65th Street to NE 74th Street, or vice versa. It might also result in more use of 62nd Avenue NE. The traffic volumes that would be impacted would be related only to those games that extend beyond the time that the roadway would be gated, if that measure were taken. While the resulting reduction of internal traffic might have some positive impacts on the residents immediately adjacent to Sports Field Drive, the shift of traffic might have adverse impacts on the alternate routes. The traffic volumes that might be affected by such a shift would be minimal, however. Up to approximately half of the trips might be shifted to an alternate route. If the street were gated after traffic from the fields with a 10:00 PM lighting limit had cleared out, approximately 90 trips might be affected. This number would reduced to the extent that users heading to fields near the opposite end of Sports Field Drive parked in lots closer to their entry on Sports Field Drive, instead of parking closer to destination field is located. In any event, the effect of this possible component of the revised field alternative on internal trip distribution would be minor.

Traffic Volumes and Impacts

As noted previously, the PM peak hour trip generation results for the revised field alternative are anticipated to be the same as originally developed for the proposed action and reported in the Final EIS.

Therefore, traffic volumes and impacts at the study intersections during the weekday PM peak hour can be assumed to be the same for both the original proposal and the revised field alternative. The PM peak hour traffic volume impacts shown in Table 3.12-6 of the Final EIS apply to the revised field alternative.

Compared to the original proposal, the effect of the operating limitations for the revised field alternative would be that up to five fields could be lighted for up to 1 hour less per day, and another field could be lighted for up to 2 hours less per day. Therefore, during high activity periods with all fields potentially scheduled for use, the maximum level of field activity and associated traffic that could occur in the late evening hours (9 to 11 PM) would be approximately half that produced with the original proposal. Therefore, while no changes in weekday PM peak hour trip generation are anticipated, the revised field alternative would result in some reduction in total *daily* traffic compared to the proposed action analyzed in the Final EIS.

Intersection Operations and Queuing

As noted, traffic associated with the revised field alternative is anticipated to have the same trip generation and distribution through study intersections as the proposed action analyzed in the Final EIS. Therefore, weekday PM peak hour intersection operations at study intersections are projected to be the same as disclosed for the proposed action in the Final EIS, as summarized in Table 3.12-7 of that document. Similarly, because the weekday PM peak hour trip generation and distribution would not change with the revised field alternative, the results of the intersection queuing analysis reported in the Final EIS remain applicable to the revised field alternative.

Transportation Concurrency

Because the weekday PM peak hour trip generation for the revised field alternative is the same as previously analyzed, the concurrency analysis for the original proposal documented in Table 3.12-8 of the Final EIS applies also to the revised field alternative.

2.12.2.2 On-Site Access and Circulation

Internal Circulation

As discussed above with respect to trip distribution, the modified parking lot configuration for the revised field alternative might result in slightly less internal traffic circulation than would the original proposal. In addition, the operating limitations on sports field use and lighting would substantially reduce the amount of on-site traffic after 10 PM, and would thereby reduce the potential interaction between internal traffic circulation and the on-site residential use near the sports fields. The possible use of gates to close portions of on-site roadways during later evening hours would have only minor effects on internal vehicular circulation patterns. On balance, the internal circulation characteristics of the revised field alternative would reduce the potential for adverse effects from sports field traffic on the transitional housing residents, compared to the original proposal.

Non-Motorized Facilities

The revised field alternative includes a single primary pedestrian way running north-south and tying the entire sports complex together. This design element would provide better pedestrian connections than the

proposed action analyzed in the Final EIS, in that it would provide more direct connections between the parking areas and the individual sports fields while retaining a sidewalk along the east side of Sports Field Drive. This feature would not constitute a significant change in internal pedestrian connections between Sports Field Drive and the trail system through the wetland/habitat complex, however, as the number and orientation of routes from the parking lots to the trail system would be essentially the same.

2.12.2.3 Parking

The revised field alternative includes the same on-site parking capacity (991 spaces) as the proposed action evaluated in the Final EIS, although the proposed parking lots have been reconfigured. As concluded in the original analysis, the proposed parking supply would be sufficient to accommodate the parking demand generated by occasions when all fields were scheduled and overlap of parking demand between games might occur. While the revised field alternative modifies the placement of some of the parking spaces, concentrating the parking supply at both the north and south ends of Sports Field Drive, the actual walking distance to the fields farthest from any parking lot would not increase noticeably. Additionally, the improved north-south pedestrian connection between fields would provide more direct pedestrian routes from the parking lots to the fields than would the original proposed action

2.12.3 Mitigation

The transportation mitigation measures described in Section 3.12.6 of the Final EIS apply also to the revised field alternative. Additional mitigation might be desirable if portions of Sports Field Drive were gated in later evening hours. This mitigation could include signage to direct traffic away from the site, or encourage field users to park in the lot closer to where they enter Sports Field Drive, rather than being solely influenced by the location of the parking in relation to the destination field. The well developed north-south walkway between the parking lots and the sports fields would encourage this pattern.

2.12.4 Cumulative Impacts

The cumulative impact assessment discussed in Section 3.12.7 of the Final EIS remains applicable to the revised field alternative. The original impact analysis included the cumulative traffic from all planned redevelopment on the Sand Point Magnuson Park site, as well as from planned development in the surrounding community. Based on their respective trip generation and traffic volume characteristics, the potential for the revised field alternative to contribute to cumulative traffic impacts would be the same as or less than for the original proposal.

2.12.5 Significant Unavoidable Adverse Impacts

The Final EIS indicated that, with the procedures and limits prescribed through a project-specific construction management plan, the unavoidable short-term construction impacts identified for the proposed action would likely not be considered significant. The Final EIS identified no significant unavoidable adverse impacts to transportation facilities or traffic conditions for the operating period of the original proposed action. These conclusions remain applicable to the revised field alternative.

2.13 PUBLIC SERVICES AND UTILITIES

Section 3.13.2 of the Final EIS identified the impacts associated with public services and utilities expected to result from construction and operation of the proposed project. The specific impact issues addressed included demands for police, fire and emergency medical services and impacts on the sanitary sewer, storm sewer, water supply and electrical systems. No significant project impacts related to public services and utilities were identified.

The revised field alternative incorporates design changes to the sports field component of the original proposal analyzed in the Final EIS; it contains the same number and type of facilities as the original proposal, as well as the same amount of total project acreage, only in a different configuration on the sports field portion of the site. These revisions to the original proposal would result in minimal or no changes in project characteristics with respect to infrastructure (sewer, storm water, water supply and electrical) systems. The most notable and measurable change is that the revised field alternative contains approximately 1.8 fewer acres of impervious surfaces than the original proposal; therefore, slightly less storm water runoff would be generated from hard paths and parking areas under this alternative. The design changes and corresponding changes in project physical characteristics are not significant and would not change the results concerning infrastructure impacts stated in the Final EIS.

The revised field alternative also incorporates operational limitations on use and scheduling of the sports fields during the later evening hours. These limitations would not result in major changes to the sports field use patterns identified for the original proposal, but they would result in a substantially reduced number of sports field visitors on the site in the late evening, particularly from 10 to 11 PM. This change in daily use patterns would represent a modest overall reduction in the number of daily, seasonal and annual sports field users, and would translate into a corresponding modest reduction in the demand for police, fire and emergency medical services. The Final EIS concluded the original proposal would not have significant impacts on these public services; the levels of impacts for the revised field alternative would be somewhat less, and would likewise be insignificant.

Overall, the impacts to public services and utilities associated with the revised field alternative would be the same as or somewhat less than those described for the original proposal in the Final EIS, and would remain at a level of insignificance. The Final EIS discussions of cumulative impacts (Section 3.13.4), mitigation measures (Section 3.13.5) and significant unavoidable adverse impacts (Section 3.13.6) remain applicable to the revised field alternative.